## What is claimed is:

1. A precision positioning unit comprising a table on which an article is to be placed, a linearly movable rod which is connected with the table at one end or a vicinity thereof and further connected with a rod actuating device at another end or a vicinity thereof, said rod actuating device capable of linearly moving the rod forward and backward, characterized in that:

the rod is connected with the rod actuating device via cushion mechanism; and

by the side of the rod is placed a rod movement control device comprising an elastic member, a ultrasonic transducer, and a ultrasonic emitting surface, the elastic member being constituted to push the ultrasonic emitting surface to a side surface of the rod when the ultrasonic transducer is inactive, and the ultrasonic transducer functioning to draw the ultrasonic emitting surface away from the rod when it is active.

- 2. The precision positioning unit of claim 1, wherein a pair of the rod movement control device are placed symmetrically around an axis of the rod.
- 3. The precision positioning unit of claim 1, wherein the ultrasonic transducer is placed and connected between two solid members using a bolt.
- 30 4. The precision positioning unit of claim 1, wherein the ultrasonic emitting surface is composed of a friction pad.
- The precision positioning unit of claim 4,
   wherein the friction pad comprises carbon fiber reinforced plastic material.

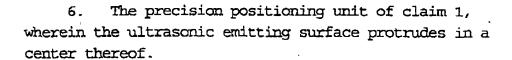
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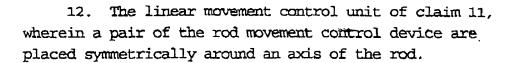
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- 5 7. The precision positioning unit of claim 1, wherein the elastic member is composed of spring.
- 8. The precision positioning unit of claim 1, wherein the rod actuating device comprises a stepping motor and a ball screw and the cushion mechanism comprises a spring.
- 9. The precision positioning unit of claim 1, wherein the rod actuating device is a voice coil motor and the cushion mechanism is included in the voice coil motor.
- 10. The precision positioning unit of claim 1, wherein the table is placed on a substrate in such manner that the table can slide linearly.
  - 11. A linear movement control unit comprising a linearly movable rod which is connected with a rod actuating device at one end or a vicinity thereof, said rod actuating device capable of linearly moving the rod forward and backward, characterized in that:

the rod is connected with the rod actuating device via cushion mechanism; and

by the side of the rod is placed a rod movement control device comprising an elastic member, a ultrasonic transducer, and a ultrasonic emitting surface, the elastic member being constituted to push the ultrasonic emitting surface to a side surface of the rod when the ultrasonic transducer is inactive, and the ultrasonic transducer functioning to draw the ultrasonic emitting surface away from the rod when it is active.



- 5 13. The linear movement control unit of claim 11, wherein the ultrasonic transducer is placed and connected between two solid members using a bolt.
- 14. The linear movement control unit of claim 11, wherein the ultrasonic emitting surface is composed of a friction pad.
  - 15. The linear movement control unit of claim 14, wherein the friction pad comprises carbon fiber reinforced plastic material.
  - 16. The linear movement control unit of claim 11, wherein the elastic member is composed of spring.
- 20 17. The linear movement control unit of claim 11, wherein the rod actuating device comprises a stepping motor and a ball screw and the cushion mechanism comprises a spring.
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  18. The linear movement control unit of claim 11, wherein the rod actuating device is a voice coil motor and the cushion mechanism is included in the voice coil motor.
- 30 19. The linear movement control unit of claim 11, wherein the ultrasonic emitting surface protrudes in a center thereof.

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